



# Amherst Massachusetts

FINANCE DIRECTOR

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TO: David Ziomek, Acting Town Manager  
Select Board.

FROM: Sandy Pooler, Finance Director

DATE: November 13, 2015

RE: Landfill Solar Power Purchase Agreement Negotiations

I have been working with counsel from Kopelman and Paige to negotiate the details of a Power Purchase Agreement (PPA) with SunEdison for an array at the New Landfill. I have also been in discussions with SunEdison on the parameters of a PPA for the Old Landfill. I have attached a draft PPA for the New Landfill and have summarized the key provisions below.

## What the Town Pays

The basic PPA structure is that SunEdison will erect a 3.7 megawatt solar array at the New Landfill to supply electricity to the Town's accounts (e.g., Town Hall, Bangs Center, police station, fire houses, water and sewer facilities, etc.). The Town will pay SunEdison a fixed 9.25¢ per kilowatt hour of electricity generated at the array over a 20 year term.

## What the Town Receives

In return, the Town will receive two sources of income/savings. First, the agreement calls for SunEdison to either pay rent or taxes in an amount of \$15,000 for each megawatt the array can produce. This will amount to approximately \$55,000 per year. The rent is reduced by whatever amount the Town receives in taxes, so the combined rent plus taxes will be \$15,000 per megawatt. If the Assessor determines the value of the array to be less than the anticipated \$15,000 per megawatt, the rent will make up the difference.

Second, the Town will receive Net Metering Credits from Eversource for each kilowatt hour the array produces. The Net Metering Credit is a statutorily mandated credit utilities must offer and is based on the utility's cost of delivering electricity to its customers. It is important to note, that the Net Metering Credit will fluctuate over time. While most people predict that electricity prices will increase over time, and therefore Net Metering Credit will too, it is possible for electricity prices to drop and may cause the Net Metering Credit to drop below the 9.25¢ the Town will pay SunEdison. In other words, under some market conditions, the Town could lose

money. Today, the Net Metering Credit is worth 10.11¢. Between January 1, 2015 and June 30, 2015, when electricity prices were exceptionally high, the Net Metering Credit was 14.6¢. SunEdison has estimated the annual Net Metering Credits at \$128,000 per year.

#### December 2016 and the Expiration of the Federal Investment Tax Credit

The federal government provides an Investment Tax Credit (ITC) of 30% of the construction cost of solar arrays. It applies to solar arrays that are constructed and operating by December 2016. If the array is not operational until January 2017, the ITC is currently scheduled to drop to 10%. There are efforts in Congress to extend the ITC, but to date they have not succeeded.

The ITC is a significant cost savings to SunEdison. The PPA provides that if the solar array cannot be constructed and operated by December 2016, the rate the Town will pay SunEdison will increase by .002875¢ for every 5% decrease in the ITC, with a maximum PPA rate increase of .0115¢ or a new PPA rate of 10.4¢. SunEdison has represented to us that these increases are necessary to allow the project to go forward in the event construction is delayed due to factors beyond its control, specifically to delays in Eversource's ability to complete system upgrades to allow the array to be interconnected to the grid. SunEdison also has represented that these increases are not economically advantageous to SunEdison; effectively SunEdison would be building the array at cost under the January 2017 pricing. Although I have faith in SunEdison and its representatives, I cannot independently verify their assertions. SunEdison also estimates that there is about a 65% chance the array could be operational by December 2016. Town staff has had conversations with Eversource staff and we believe Eversource is committed to moving forward on interconnection in a timely manner, but there is uncertainty as to the amount of work to be done to connecting infrastructure and substations, as well as the competition from other solar projects, including ones at UMass, Amherst College, and other projects yet to be put forward.

As the tables in Appendix A show, if the ITC goes down to 10%, at current Net Metering Rates, there could be times of the year when the Town is paying more to SunEdison than it receives in Net Metering Credits.

SunEdison has offered to restructure the draft PPA and instead of offering a fixed 9.25¢ rate, to offer a guaranteed 12% savings from the Net Metering Rate. The advantage of the guaranteed savings is that unless electricity prices fall very drastically to a level we would need to negotiate with SunEdison, the Town would not lose money. This is the structure of the PPA the Regional Schools signed. On the other hand, a fixed price offers greater potential savings, if electricity prices rise.

I welcome your feedback on this important issue. It is my recommendation that the Town stay with the fixed price option.

#### Other provisions

- 20 year term with a five year renewal option.

- Town has an option to purchase the solar array at 10 or 15 years into or at the end of contract.
- If the Town does not purchase the solar array, the developer must remove it and return the site to its original condition, consistent with MassDEP rules and orders.
- The developer is responsible for all annual maintenance and upkeep charges and for ensuring that the installation of the solar array keeps the landfill cap in a safe condition.
- The Town retains the right to make necessary repairs to the landfill.

The proposed re-use of portions of the landfill site for solar will require extensive state and local permits, with opportunities for public input, before any project can proceed.

Massachusetts, to its credit, has some of the strictest environmental regulations in the country. *No solar project will be permitted by MassDEP unless they are convinced it can be done safely.* A Special Permit will also be required from the Amherst Zoning Board of Appeals. Appendix B is a flowchart showing the five major regulatory or permitting processes through which a solar array on a landfill must go.

### **Old Landfill**

The Town must also decide how to proceed with solar at the Old Landfill.

It is my recommendation that the Town pursue a solar array at the Old Landfill. That array could meet the remaining .5 megawatts of electrical need for the Town, plus some amount for the elementary schools. The amount needed for the elementary schools will be determined once final plans are in place for the Wildwood and Fort River Schools, specifically how much solar could be built on a new school building or on renovated buildings. A crucial third component of solar at the Old Landfill is a Community Solar project that would allow homes that cannot install solar panels to have access to solar power. In my discussions with SunEdison, I have been told that we could have flexibility in the mix of Town, School, and Community Solar.

Some people have raised questions about the condition of the Old Landfill and its suitability for a solar array. It is my recommendation that we move forward with a project there and allow the regulatory process outlined in Appendix B to deal with those questions. If you agree, I would continue negotiating with SunEdison and will bring a draft PPA to you for your review.

## Appendix A

### January to June 2015

ITC	Base PPA Rate	PPA Increase	New PPA Rate	Net Metering	Gain or (Loss)
30%	\$9.25	\$0.0000	\$9.25	\$14.60	\$5.35
25%	\$9.25	\$0.2875	\$9.54	\$14.60	\$5.06
20%	\$9.25	\$0.5750	\$9.83	\$14.60	\$4.77
15%	\$9.25	\$0.8625	\$10.11	\$14.60	\$4.49
10%	\$9.25	\$1.1500	\$10.40	\$14.60	\$4.20
5%	\$9.25	\$1.4375	\$10.69	\$14.60	\$3.91
0%	\$9.25	\$1.7250	\$10.98	\$14.60	\$3.62

### July to December 2015

ITC	Base PPA Rate	PPA Increase	New PPA Rate	Net Metering	Gain or (Loss)
30%	\$9.25	\$0.0000	\$9.25	\$10.11	\$0.86
25%	\$9.25	\$0.2875	\$9.54	\$10.11	\$0.57
20%	\$9.25	\$0.5750	\$9.83	\$10.11	\$0.28
15%	\$9.25	\$0.8625	\$10.11	\$10.11	(\$0.01)
10%	\$9.25	\$1.1500	\$10.40	\$10.11	(\$0.29)
5%	\$9.25	\$1.4375	\$10.69	\$10.11	(\$0.58)
0%	\$9.25	\$1.7250	\$10.98	\$10.11	(\$0.87)

System Information		
System Size (kW)	3,700	
System Yield	1,256	
Total Production (kWh)	4,647,300	
Jan. - Jun. Production	2,418,233	52.04%
Jul. - Dec. Production	2,229,067	47.96%
Jan. - Jun. NMC Value	0.14598	
Jul. - Dec. NMC Value	0.10105	
2016 Net Metering Credit	0.0925	
2017 Net Metering Credit	0.104	
Lease/PILOT (per MW)	\$15,000	

	2016			2017		
	Savings	Lease/Tax	Total	Savings	Lease/Tax	Total
<b>Jan. - Jun.</b>	\$129,327	\$27,751	\$157,078	\$101,517	\$27,751	\$129,268
<b>Jul. - Dec.</b>	\$19,059	\$27,751	\$46,809	-\$6,576	\$27,751	\$21,175
<b>Total</b>	\$148,386	\$55,501	\$203,887	\$94,942	\$55,501	\$150,443

# Solar Project Permitting Flow

